DaimlerChrysler AG

Abstract

The invention relates to a device and a method for preventing roll in a vehicle, comprising a detection device (10) which determines an actual value ($\dot{\psi}_{actual}$) of a yaw rate variable describing the yaw rate of the vehicle, an evaluation unit (11) which determines a setpoint value ($\dot{\psi}_{setpoint}$) of the yaw rate variable and a threshold value ($\dot{\psi}_{threshold}$) of the yaw rate, and a control device (12) for controlling vehicle units (13) provided for influencing the longitudinal and/or transversal dynamics of the vehicle. The evaluation unit (11) controls the vehicle units (13), based on a comparison between the determined actual value ($\dot{\psi}_{actual}$) of the yaw rate variable and the determined setpoint value ($\dot{\psi}_{setpoint}$) of the yaw rate variable, in such a way that the determined actual value ($\dot{\psi}_{actual}$) of the yaw rate variable assumes the determined setpoint value ($\dot{\psi}_{setpoint}$) of the yaw rate variable, whereby in the event that the setpoint value ($\dot{\psi}_{setpoint}$) of the yaw rate variable exceeds the threshold value ($\dot{\psi}_{threshold}$) of the yaw rate variable, to avoid rollover of the vehicle the evaluation unit (11) limits the determined setpoint value ($\dot{\psi}_{setpoint}$) of the yaw rate variable to the determined threshold value ($\dot{\psi}_{threshold}$) of the yaw rate variable. According to the invention, the evaluation unit (11) determines the threshold value ($\dot{\psi}_{threshold}$) of the yaw rate variable as a function of a threshold value ($\varphi_{threshold}$) of a roll angle variable (φ) which describes a roll angle of the vehicle.

(Figure 1)

[see source for figures]

"ist"	=	actual
"soll"	=	setpoint
"grenz"	=	threshold
"Ende"	=	end
"ja"	=	yes
"nein"	=	no